

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS
MANAGEMENT SERVICES DIVISION

MANUAL OF SPACE STANDARDS
AND METHODS FOR DETERMINING
STATE AGENCY FACILITY NEEDS

TABLE OF CONTENTS

INTRODUCTION	1
DEFINITIONS	2
Components of Assignable Space.....	3
SPACE PLANNING METHODS AND STANDARDS	5
Level I: Long-Range Forecasting of Agency Space Needs.....	6
Level II: Model for Space Calculating Space Needs ...	7
Lever II: Space Calculation Model for Planning State Office Facilities	8
Level III: Planning for Specific Space Requirements..	10
Part I Worksheet	12
Part II Worksheet	14
Part III Worksheet	16
Worksheets Summary	22
CONCLUSION	24
APPENDICES	
APPENDIX A: BIBLIOGRAPHY	25
APPENDIX B: DEFINITIONS FOR FACILITIES SPACE CATEGORIES	26
APPENDIX C: CAFETERIA SPACE CALCULATION FORMULA	30
APPENDIX D: SPACE ASSIGNMENT CRITERIA AND STANDARDS .	31
APPENDIX E: INSTRUCTIONS FOR PREPARING SPACE PLANNING WORKSHEETS	34

INTRODUCTION

The purpose of this manual is to present a series of planning approaches and methods for use by State agencies in forecasting and calculating space necessary to fulfill their missions. These space planning techniques are based on definitions and objective space assignment criteria and standards drawn from experience in the private and public sectors, and serve as the principal reference for determining the amount of assignable floor area needed for personnel, equipment and support functions.

The methods used in this manual for forecasting agency space requirements are described in detail. Three levels of planning are presented which can be used to determine future space requirements ranging from a broad long-range estimate to a precise determination of floor area needed. Guidelines are provided to assist agencies in choosing the level of planning that should be used.

This document is intended to formally establish standards and processes to determine the amounts of space needed by State agencies. These standards reflect State policies on facilities planning, as well as space allocation practices followed by corporate space users in the private sector. Published reference sources used in preparing these standards are listed in the bibliography contained in Appendix A.

DEFINITIONS:

In the past, there has been a lack of consistency and commonality in referring to the several categories of space measurement and quantification. Different terms have been applied to a given unit of space; e.g., "assignable", "usable", "net occupied", etc. have been used interchangeably to describe building floor areas given over to active functions. This has resulted in confusion and delays in the implementation of projects.

Thus, it is important to establish uniform definitions to describe and categorize facilities functions and their respective components. One widely accepted source for defining building areas is the Facility Inventory Classification manual (FICM), published in 1973 by the former Federal Department of Health, Education and Welfare. Much of the FICM manual was drawn from authoritative sources, (e.g., the National Academy of Sciences, Building Research Advisors Board), and was developed primarily to aid in classifying space in higher education facilities. However, the definitions of building areas are applicable to all types of structures suitable for occupancy. For purposes of establishing a common point of reference for classifying space, the definitions contained in the FICM manual are incorporated as the basis of this manual, and are found in Appendix B.

It is an important goal in facilities planning, design and management to maximize the ratio of assignable office space to non-assignable space. Contemporary design criteria used by architects and office space planners are aimed at achieving at least an 80 percent efficiency ratio: that is, 80 percent or more of a building's gross area can be assigned to active functions (such as office workstations, intra-unit circulation, conference rooms, cafeterias, mailrooms, duplicating and photocopy, etc.). The remaining twenty percent or less is non-assignable and represents circulation (central corridors, stairs, elevators), custodial (janitor's closets, storage of cleaning supplies and equipment), mechanical (restrooms, boiler rooms, utility shafts, etc.) and structural (exterior walls, interior partitions, unusable areas in basements and attics).

Older buildings with large lobbies, wide corridors and extensive mechanical systems, tend to be at the lower end of the efficiency scale -- typically 60-70 percent. This means that a higher proportion of unproductive non-assignable space must be maintained in comparison to productive office space and supporting services. The State's objective in providing modern facilities for agency office functions, either in leased facilities or in new State-owned buildings is to achieve an efficiency factor of at least 80 percent.

Components of Assignable Space

As described on page 26 of Appendix B, assignable area encompasses all floor space "...available for assignment to an occupant, ... (and) which can be put to useful purposes in accomplishing the agency's mission." It is important to focus on assignable area as the point of departure for determining an agency's overall facilities requirements, because such space is the fundamental "building block" of gross floor area calculations. Below are further definitions of the components comprising assignable floor area in State facilities:

1. Workstations: space for personnel, with desk, chair and other assigned furniture and equipment necessary to perform tasks, whether in a private office with floor-to-ceiling walls, or an open office area either with or without modular system partitions.
2. Support Equipment: other furniture or special equipment (in addition to desks, chairs and accessories directly assigned to workstations) needed to carry out general office functions. This category includes such items as photocopy machines, central file cabinets, shared-use computer terminals and printers, and work tables.
3. Support Areas: functional areas and spaces not normally used to accommodate the workstations of office personnel, but necessary for the proper conduct of agency activities. This category includes conference rooms, reception areas, interview and testing rooms, laboratories and other similar functions.
4. General Services: mail and central supply rooms, printing and high-volume reproduction centers and records management functions are some of the functions included in this category.
5. Employee Services: lounges, employee health clinics, coffee shops, canteen vending areas, candy counters, news stands and concessions providing conveniences, services and personal items are included in this category.

6. Building Services: facilities management (e.g., building superintendent's office), shipping and receiving, and bulk supplies and equipment storage are among the functions included under building services.

Large private office space users, such as insurance companies, banks, and corporate headquarters facilities in the Greater Hartford area, typically have requirements ranging from 10 percent to 15 percent of aggregate assignable space for general services, employee service and building services.

7. Intra-unit Circulation: this category refers to the assignable space between workstations for circulation within functional units, and includes secondary aisles and corridors to tie the various office functions together. A factor of 8-10 percent is used in the standards incorporated in this manual as an add-on for space assigned to office personnel (generally in open areas but excluding private office suites served by public corridors), unassigned equipment and furniture, and support facilities such as conference rooms and interview rooms. However, intra-unit circulation space allowances are not added on to employee services and building services functions.

In order to arrive at the gross building area required in an agency facility, the non-assignable space is added to assignable areas. As described in Appendix B, this includes space devoted to mechanical equipment and operations, stairs and elevators, general restrooms, main access corridors, lobbies and the thickness of walls and permanent partitions.

Economies of scale come into play with respect to the assignable-to-gross ratios used to measure efficiency of space. Experience in facilities management has demonstrated that the smaller the overall facility, proportionally more floor area is given over to non-assignable space requirements. Moreover, smaller agencies require proportionally more assignable space per employee. This disproportionality occurs because of minimum levels of support areas and unassigned equipment required for agency activities.

SPACE PLANNING METHODS AND STANDARDS

This section contains three different space planning models that can be used to determine the space needs of State agencies. The model used to determine space depends on the level of detail involved and the purpose for which the results will be used.

- * Level I is a general long-range forecasting model for determining gross floor space requirements.
- * Level II provides both assignable and gross space needs based on the numbers and categories of projected personnel, various support functions, and certain assumptions regarding building efficiency.
- * Level III provides a detailed assessment of assignable space requirements, using specific data on authorized and projected staffing, itemized equipment listing and support space.

Levels I and II are useful planning methods for projecting space needs as part of the five-year Facility and Capital Planning process, while level III is applicable to specific facilities situations where a discrete project has been identified and designs are being developed.

The first level of planning uses broad space planning parameters and requires the input of only the total number of personnel employed by a State agency in order to arrive at gross square feet requirements. This approach is useful for making preliminary estimates of aggregate space needs on a long-range basis. It will provide a rough basis for projected facility requirements when detailed information on staffing levels by specific category and support functions is not available.

The second level of planning is formatted as a computerized space calculation model, and provides a more detailed approach to projecting space needs. While certain assumptions are built into the model with regard to workspace for agency employees and floor area requirements for support functions and equipment, the format is flexible enough to adapt to unique or extraordinary requirements. The second level method is used where specific data on staffing category projections and other inputs are available.

The third level of planning for agency space needs requires firm data on agency employees within specific position categories, as well as actual requirements for support space and unassigned equipment and furniture.

A range of 12 space assignment standards, based on functional criteria, form the basis for the standards that are incorporated into this manual. This space planning method uses computerized worksheets, and has been designed to automatically calculate requirements based on standards.

Level I Model for Calculating Agency Space Needs

The first general approach to making an approximate determination of space needed by State agencies is on the basis of aggregate average gross floor area per person. This method of space forecasting takes into account the space needed for agency office personnel and supporting functions, as well as the non-assignable requirements such as corridors, restrooms, stairwells, lobbies and mechanical systems. The standards shown in the following table assume a general mix of office and related space, but do not include allowances for full-service cafeterias or large specialized areas such as DMV Branch Office public areas or client waiting rooms in Human Services District Offices:

TOTAL EMPLOYEE POPULATION	GROSS FLOOR AREA/EMPLOYEE	FACILITY SIZE RANGE (GROSS SQUARE FEET)
Under 60	225	Under 13,500
60 to 350	200	12,000-70,000
Over 350	190	Over 70,000

These standards are useful only in making an initial approximation of space needs. They do reflect empirical observations of real-life situations found in the public and private sectors, and are intended to serve as a "rule-of-thumb" in calculating facilities needs when detailed planning data are lacking. It is important to re-emphasize that the size and functional efficiency of a facility influence the use of Level I planning standards. As noted earlier, smaller buildings tend to be less efficient because of the disproportionate amount of space necessary for lobbies, stairwells, corridors, restrooms, mechanical equipment and other non-assignable floor areas.

Level II Model for Calculating Space Needs

Determining space needs using the Level II Model requires data relative to the numbers and types of personnel and other elements of space use. This forecasting method provides more detail than Level I and is based on the numbers of executive, managerial, professional and clerical staff. It incorporates allowances for conference rooms, general services (mail, supply storage, records management, etc.), building services (security, shipping and receiving, building maintenance, etc.), and employee services (lounges, coffee shops, news stands, etc.) This planning model also takes into account an agency's requirements for mainframe computer space and cafeteria facilities. Assignable space needs are then extrapolated to determine the gross space requirements based on building efficiency, (the ratio of assignable to non-assignable space.) For example, if an agency's assignable space requirement were 800 square feet and the building's efficiency factor is 80 percent, the gross area required would be 1,000 gsf.

It is important to point out that the assignable space factors for the various categories of personnel used in the Level II model are generalized and represent a broad range for forecasting purposes. For example the area standard for managerial personnel used here is 150 sq. ft., whereas the Level III space planning model has three separate categories for managers, ranging from 175 sq. ft. to 120 sq. ft.

The example illustrated in the Level II space planning model on the following page is based on a hypothetical agency with a staff of 500 as detailed below:

A. Executive Personnel	
1. Executive Management	5
2. Executive Secretaries	5
B. Managerial Personnel	45
C. Office Professionals	240
D. Field Professionals	85
E. Clerical Personnel	<u>120</u>
Total Staff	500

DPW/MGT. SERVICES--LEVEL II SPACE CALCULATION MODEL FOR PLANNING STATE OFFICE FACILITIES

DATA INPUT

FACILITY NAME-----HYPOTHETICAL OFFICE BLDG.	EXECUTIVE MANAGEMENT	5	1.0%
LOCATION-----HARTFORD	EXEC. SECRETARIES	5	1.0%
AGENCY-----HYPOTHETICAL	MANAGEMENT PERSONNEL	45	9.0%
	PROFESSIONALS (OFF)	240	48.0%
	PROFESSIONALS (FIELD)	85	17.0%
	CLERICAL PERSONNEL	120	24.0%
	TOTAL	500	100.0%

GENERAL SUPPORT/EQUIPMENT SPACE FACTOR	20.0%
GENERAL SERVICES SPACE RATIO	5.5%
BUILDING SERVICES SPACE RATIO	2.5%
EMPLOYEE SERVICES SPACE RATIO	1.5%
CAFETERIA SPACE (FROM FORMULA)	0
MAINFRAME COMPUTER SPACE	1,000
BLDG EFFICIENCY RATIO (IN %)	80.0%

A. EXECUTIVE PERSONNEL SPACE (INCLUDES MEETING AND RECEPTION SPACES)

1. EXECUTIVE MANAGEMENT PERSONNEL	
5 X 375	1,875
2. EXECUTIVE SECRETARIES	
5 X 125	625

TOTAL: EXECUTIVE SPACE 2,500

B. MANAGERIAL PERSONNEL SPACE

45 X 150 6,750

C. PROFESSIONAL PERSONNEL SPACE (O)

240 X 110 26,400

D. PROFESSIONAL PERSONNEL SPACE (F)

85 X 60 5,100

E. CLERICAL PERSONNEL SPACE

120 X 85 10,200

TOTAL: ALL PERSONNEL 50,950

F. GENERAL CONFERENCE ROOM SPACE

285 / 4 X 25 1,701

G. GENERAL OFFICE SUPPORT/EQUIPMENT, SPACE

50,950 X 20.0% 10,190

H. MAINFRAME COMPUTER EQUIPMENT/OPERATIONS SPACE

1,000 (GIVEN) 1,000

I. GENERAL SERVICES

63,921 X 5.5% 3,516

J. BUILDING SERVICES

63,921 X 2.5% 1,578

K. EMPLOYEE SERVICES

63,921 X 1.5% 959

L. FULL SERVICE CAFETERIA (OPTIONAL)

0 (GIVEN:SEE FORMULA) 0

TOTAL ASSIGNABLE SQUARE FEET 69,994
17,498

GROSS BUILDING AREA (GSF)	87,492
AVERAGE GROSS SQ. FT./EMPLOYEE	175
AVERAGE ASSIGNABLE SQ. FR./EMPLOYEE	140

The following notes further describes the various features of the Space Calculation Model:

1. The assignable space factors for executive management personnel include an allowance for executive conference space and reception areas.
2. The space calculation model includes allowances for intra-unit circulation.
3. General conference room space in this model is abased on a rule-of-thumb of one conference room seat for every four managers and professionals in the aggregate, multiplied by 25 sq. ft. In the third and most detailed level of planning, the formula uses a base factor of 75 sq. ft. and a sliding scale from 20 to 10 sq. ft. per person based on the number of seats specified by the agency for each conference room.
4. General office support and equipment space in the space calculation model adds a factor of 20 percent to the space required under items A through F. This factor takes into account additional space requirements such as storage, file cabinets, photocopy machines, reception and waiting rooms and other general support functions. If the agency's requirements call for extraordinary support space such as waiting areas for large numbers of the public (e.g., a district office of the Department of Income Maintenance or laboratory space for the Department of Environmental Protection), this factor can be increased.
5. Space for mainframe computer equipment and operations must be calculated separately by the agency and added as a separate requirement. "Mainframe computers" refers to equipment and operations that require raised flooring, high capacity air-conditioning and specialized environments for large central processing units, peripheral devices for storage, printing and control of data, and networking equipment for remote data terminals.
6. General Services, building services and employee services are defined on page 4 and, in the aggregate, comprise an additional 10.5 percent of all personnel, conference, support equipment and computer space.

7. If a full-service cafeteria is required for a facility, the space requirement for this function is calculated separately using the formula found in Appendix C and added to the agency's overall assignable floor area requirement.

Level III Model for Calculating Specific Space Requirements

This is the most detailed of the space planning models. A total of twelve space standards are used:

Executive - 3	350 sq. ft.
Executive - 2	275
Executive - 1	200
Managerial - 3	175
Managerial - 2	150
Managerial - 1	120
Professional - 3	110
Professional - 2	90
Professional - 1	60
Clerical - 3	90
Clerical - 2	75
Clerical - 1	60

The amount of space assigned to each employee category is based on the determination of what is necessary to permit efficient performance of tasks. Job titles, pay classification, seniority or rank are not as relevant to space assignment determinations as are the activities actually conducted and the duties performed by personnel occupying office space. An agency head, for example, requires office space adequate to hold frequent meetings with key staff, greet important visitors from the public and other agencies, and hold confidential telephone and face-to-face conversations.

The space allocations should also be adequate for the furniture and equipment needed by an office worker to perform assigned tasks. One of several planning techniques for calculating the floor space needed for a given office function is to measure the footprint or floor area occupied by assigned furniture and equipment and multiply the aggregate by a factor of three. To

illustrate, a commissioner heading an agency might have a typical array of furniture and equipment as follows:

<u>ITEM</u>		<u>AREA (ASF)</u>
Executive desk	36" x 75"	19.00
Executive chair	30" x 30"	6.25
Credenza	18" x 72"	9.00
3 Visitors chairs @	24" x 30"	16.67
1 Side table	36" x 48"	12.00
1 File	28" x 18"	3.50
1 Bookcase	28" x 48"	6.00
1 Conference table	42" x 72"	21.00
6 Conference chairs @	24" x 24"	<u>24.00</u>
Total footprint area		117.42

If the "rule of 3" were used in this case, an assignable space requirement of approximately 350 sq. ft. would apply.

This technique provides for movement and passage space around furniture as well as adequate "elbow room" inside a private office.

The above example is illustrative of only one approach for calculating private offices, and is not applicable to all office workstations. The space assignment criteria and standards found in Appendix D spell out the determinants used in establishing space requirements based on functions and duties.

Level III model uses a series of three worksheets. The first of these worksheets deals with space requirements for office workstations; the second for unassigned equipment and furniture used by the unit as a whole; the third relates to needed support space. Each of these worksheets is described in further detail, along with examples of what they look like in completed form for a subdivision of a hypothetical agency. Detailed instructions for preparing these worksheets are found in Appendix E.

Part I Worksheet

The Part I worksheet is prepared by each functional subdivision of a State agency and provides for all authorized positions, filled and vacant, plus future positions projected for the following three years. The standard applied includes necessary space for general equipment and furniture normally assigned to the position. Assignable space for extra furniture or special equipment required by an agency employee is added to the amount of space called for by the applicable standard.

Added to the basic standard used for personnel and assigned equipment is a factor for intra-unit circulation. This factor is separate from non-assignable space for general circulation (corridors, stairs, lobbies, elevators, etc.), and is applied to allow for movement between workstations and around furniture and equipment.

Please refer to the following page for an illustration of how this Part I Worksheet was prepared for a hypothetical agency subdivision.

WORKSHEET FOR PLANNING STATE OFFICE SPACE NEEDS

PART 1:
AGENCY OFFICE PERSONNEL

AGENCY NAME: HYPOTHETICAL STATE AGENCY
AGENCY #: 1234
SUBDIVISION OR FUNCTION: CENTRAL OFFICE - HARTFORD
PREPARED BY: H. CRANDALL
TELEPHONE #: 566-1234

DEPARTMENT OF PUBLIC WORKS
MANAGEMENT SERVICES DIVISION

DATE: AUGUST 3, 1994
AGENCY/SUBDIVISION CODE: DPW123

(ASSIGNED BY PUBLIC WORKS)

*****AREA SUMMARY FOR THIS SUBDIVISION*****
EMPLOYEE OFFICES & WORKSTATIONS 1975
ASSIGNED EQUIPMENT/EXTRA FURNITURE
INTRA-UNIT CIRCULATION 117.5

TOTAL ASSIGNABLE SQUARE FEET 2092.5
TOTAL NUMBER OF POSITIONS 16
AVERAGE ASSIGNABLE SPACE/PERSON 131

ITEM NUM- BER	TITLE/FUNCTION	INCUMBENT'S NAME IF FILLED; PROPOSED OTHERWISE, "V" IF VACANT OR "P" IF PROJECTED WITHIN THREE YEARS	IF SPECIAL EQUIPMENT OR FURNITURE IS ASSIGNED TO THIS POSITION, LIST ITEM #'S FROM PART II WORKSHEET, WITH QUANTITIES OF EACH ITEM (E.G., 3X17/2) ETC.)	CLASSIFICATION SPACE PERSON-CATEGORY PROJ-SOURCE	*****TO BE COMPLETED BY PUBLIC WORKS***** PUBLIC WKS:ADD-ON FOR:ADD-ON FOR:ASSIGNABLE SPACE ASSIGNED INTRA-UNIT:SD, FEET STANDARD EQUIP/FURNITURE:REQUIRED	*****K*****
1	DIRECTOR/AGENCY HEAD	B. ROSS:EXEC-2		** ** EXEC-2	275	0: 275
2	PROGRAMS SUPERVISOR	H. CRANDALL:EXEC-1		** ** MGR-3	175	0: 175
3	DIRECTOR OF SITES AND LOCATIONS	H. STEWART:EXEC-1		** ** MGR-3	175	0: 175
4	SECRETARY / CONNECTICUT THEORETICAL COMMISSION	V :EXEC-1		** ** MGR-3	175	0: 175
5	REVIEW AND COMPLIANCE COORDINATOR	R. GILBERTO:PROF-3		** ** PROF-3	110	11: 121
6	REVIEW AND COMPLIANCE ASSOCIATE	R. SZOZANSKI:PROF-3		** ** PROF-3	110	11: 121
7	STATE PROJECTS/TECHNICAL ASSISTANCE COORDINATOR	J. PIKE:PROF-3		** ** PROF-3	110	11: 121
8	TAX ACT COORDINATOR/PRESERVATION PLANNER	E. SCOTT:PROF-3		** ** PROF-3	110	11: 121
9	REGISTRATION COORDINATOR	B. LYNCH:PROF-3		** ** PROF-3	110	11: 121
10	SURVEY AND GRANTS DIRECTOR	J. MARTIN:PROF-3		** ** PROF-3	110	11: 121
11	LEAD PLANNING ANALYST	A. KAESER:PROF-3		** ** PROF-3	110	11: 121
12	FAO/BUSINESS SERVICES OFFICER	P. SLOAN:PROF-2		** ** PROF-2	90	9: 99
13	FAO/GRANTS ADMINISTRATOR	J. EDGAR:PROF-2		** ** PROF-2	90	9: 99
14	SECRETARY II	R. WORTH:CLER-2		** ** CLER-2	75	8: 83
15	SECRETARY II	W. BLESSING:CLER-2		** ** CLER-2	75	8: 83
16	SECRETARY I	A. ADKER:CLER-2		** ** CLER-2	75	8: 83
17				** **		
18				** **		
19				** **		
20				** **		
21				** **		
22				** **		
23				** **		

Part II Worksheet

The Part II worksheet is also prepared for each agency subdivision and calculates space needed for unassigned equipment and furniture: storage cabinets, photocopy machines, general agency files, and other items that are accessible to and used by the staff as a whole. The worksheet calculates space required based on standards, adds an allowance for intra-unit circulation and aggregates the total space required.

The illustrative Part II worksheet on the following page contains the standards for various items of unassigned equipment and furniture and shows what this form looks like when completed by a hypothetical agency.

WORKSHEET FOR PLANNING STATE OFFICE SPACE NEEDS

PART II:
UNASSIGNED OFFICE FURNITURE & EQUIPMENT

DEPT. OF PUBLIC WORKS
MANAGEMENT SERVICES DIVISION

AGENCY NAME: HYPOTHETICAL STATE AGENCY
AGENCY NUMBER: 1234
SUBDIVISION OR FUNCTION: CENTRAL OFFICE - HARTFORD
PREPARED BY: H. CRANDALL
TELEPHONE #: 566-1234
DATE: AUGUST 3, 1994
AGENCY/SUBDIVISION CODE: DPM456

*****AREA SUMMARY FOR THIS SUBDIVISION*****
SPACE FOR UNASSIGNED EQUIP./FURN. 399
ADD-ON FOR INTRA-UNIT CIRCULATION
TOTAL ASSIGNABLE SQUARE FEET 399
(ASSIGNED BY PUBLIC WORKS)

ITEM:	DESCRIPTION	CURRENT	ESTIMATE	*****TO BE COMPLETED BY DEPT. OF PUBLIC WORKS*****	NUMBER	IN	SPACE	CURRENT	SO.	FUTURE	SO.	ADD FOR	ASSIGNABLE
NUM-1		OF	1	IN	SPACE	1	FT	REQUIRE	1	INTRA-UNIT	1	ISO, FEET	
BER		ITEMS	3	YRS	STANDARD	MENT	MENT	CIRCULATION	REQUIRED				
1:	AUDIO-VISUAL EQUIPMENT, FLOOR-MOUNTED	1	2	20	16	24	24						
2:	BOOK-CASES (15 X 48 INCHES)	1	3	8	12	15	15						
3:	CHAIR, PUBLIC WAITING OR VISITORS	1	3	12	15	15	15						
4:	CHAIRS-UPHOLSTERED FURNITURE	1	3	12	15	15	15						
5:	CHAIRS, DESK-SIDE OR CONFERENCE	1	3	12	15	15	15						
6:	COAT RACKS (CAPACITY FOR 9 GARMENTS)	1	3	4	9	27	36						
7:	COMPUTER PRINTER (FLOOR-MOUNTED)	1	1	10	10	10	10						
8:	COMPUTER PRINTOUT RACK	1	1	8	8	8	8						
9:	CONFERENCE TABLE (TYPICAL: 42' X 96")	1	1	50	50	50	50						
10:	COUNTERS (RECEPTION/SERVICE) LIN. FT.)	1	1	4	4	4	4						
11:	CREDERZA	1	1	10	10	10	10						
12:	DATA ENTRY WORK STATION	1	1	35	35	35	35						
13:	DESK/CHAIR, EXECUTIVE	1	1	50	50	50	50						
14:	DESK/CHAIR, DOUBLE PEDESTAL (30"X60")	1	1	40	40	40	40						
15:	DRAFTING TABLE AND STOOL	1	1	60	60	60	60						
16:	DRAFTING SUPPLY CABINET	1	1	20	20	20	20						
17:	FACSIMILE TRANSMIT/RECEIVE MACHINE	1	1	20	20	20	20						
18:	FILE CABINETS (LATERAL OPENING DRAWERS)	1	1	10	10	10	10						
19:	FILE CABINETS (VERTICAL STACKED DRAWERS)	12	12	9	108	108	108						
20:	FILE SYSTEM ("LECTRIEVER" TYPE SYSTEM)	1	1	80	80	80	80						
21:	FOOD SERVICE/CANTEEN EQUIPMENT	1	1	18	18	18	18						
22:	LOCKERS	1	1	6	6	6	6						
23:	NAIL METERING MACHINE (FLOOR-MOUNTED)	1	1	15	15	15	15						
24:	NAIL RACK (FLOOR-MOUNTED)	1	1	12	12	12	12						
25:	MICROCOMPUTER TABLE (KEYBOARD/SCREEN)	1	1	35	35	35	35						
26:	MICROFILM CAMERA	1	1	35	35	35	35						
27:	MICROFILM READER	1	1	20	20	20	20						
28:	PHOTO PROCESSING EQUIPMENT	1	1	80	80	80	80						
29:	PHOTOCOPY MACHINE (FLOOR-MOUNTED)	1	1	45	45	45	45						
30:	PHOTOCOPY SUPPLY CABINET	1	1	20	20	20	20						
31:	PLAN FILE (FLAT-STORAGE DRAWERS)	1	1	30	30	30	30						
32:	PLAN FILE (VERTICAL SUSPENSION RACK)	1	1	22	22	22	22						
33:	PLAN PRINTING MACHINE	1	1	30	30	30	30						
34:	RADIO TRANSMITTER/RECEIVER STATION	1	1	40	40	40	40						
35:	SAFE (FLOOR-MOUNTED)	1	1	10	10	10	10						
36:	SHELVING (FLOOR MOUNTED 4 LIN. FT UNITS)	1	1	6	6	6	6						
37:	SHREDDING MACHINE	1	1	8	8	8	8						
38:	SOFA	1	1	18	18	18	18						
39:	STORAGE CABINET (FLOOR-MOUNTED)	4	4	8	32	32	32						
40:	TABLE, OCCASIONAL FURNITURE	1	1	8	8	8	8						
41:	TUB FILE	1	1	7	7	7	7						
42:	WATER FOUNTAIN	1	1	6	6	6	6						
43:	WORD PROCESSING WORK STATION	1	1	35	35	35	35						
44:	WORK TABLE (24 X 48 INCHES)	1	1	15	15	15	15						
45:	WORK TABLE (30 X 60 INCHES)	3	3	18	54	54	54						
46:	WORK TABLE (36 X 72 INCHES)	1	1	30	30	30	30						

Part III Worksheet

Part III in this series of worksheets calculates space requirements for support and specialized areas. Included in this category are such uses as conference rooms, waiting areas, mail rooms and other support functions. Many of these functions are calculated in accordance with formulas that are built into the computerized calculations. However, the majority of the specialized areas require an estimate of space requirements by the using agency.

The following standards apply to calculations of assignable area required for various support spaces that primarily involve conference, training, interviews; hearing and other related functions:

1. Cafeterias: See Appendix C for formula to calculate area.
2. Classrooms: Defined as rooms enclosed by floor-to-ceiling walls and used for instructional activities such as lectures and seminars. Also included in this category of support space are examination rooms for administering written tests to members of the public or groups of State employees. Such rooms are normally furnished with an instructor's desk or lectern and student chairs with writing surface arm.

Standard - 120 sq. ft. minimum or 20 sq. ft. per person total seating capacity, whichever is greater.

Illustrations - classroom for 5 persons: 120 s/f
- classroom for 10 persons: 200 s/f

- 3a. Conference Rooms: Defined as rooms with speech privacy provided by doors and floor-to-ceiling walls, with one or more tables around which the conferees meet for discussions.

- 3b. Conference Areas: Defined as meeting spaces that do not offer speech privacy because they lack full height walls and doors. Such areas are usually part of an open office arrangement and may be screened for visual privacy by means of partial height modular partitions.

Standard - base allowance of 75 sq. ft. for conference table and accessory furniture, to which is added:

20 sq. ft. per seat, first six persons,
plus 15 sq. ft. per seat, 7th through 12th persons,
plus 12 sq. ft. per seat, 13th through 20th persons,
plus 10 sq. ft. per seat, 21st and additional persons.

This sliding scale for seating space allowances takes into account the fact that smaller conference rooms require proportionally more space per seat than larger capacity rooms.

Illustration - conference room for 6 persons:

$$75 + 6 \times 20 \text{ sq. ft.} = 195 \text{ sq. ft.}$$

$$\begin{array}{l} \text{for 15 persons: } 75 + (6 \times 20) + \\ (6 \times 15) + (3 \times 12) = 321 \text{ sq. ft.} \end{array}$$

$$\begin{array}{l} \text{for 25 persons: } 75 + (6 \times 20) + \\ (6 \times 15) + (8 \times 12) + (5 \times 10) = 431 \text{ sq. ft.} \end{array}$$

4. Hearing Rooms: Defined as enclosed spaces laid out and furnished to include a raised dais for hearing officers, tables for hearing participants, witnesses and legal counsel, and seating for spectators.

Standard - base allowance of 120 sq. ft. for dais, tables for hearing participants, and accessory functions (e.g., hearing stenographer) to which is added 15 sq. ft. per seat for spectator capacity.

Illustration - 35 seat hearing room:

$$120 + (35 \times 15) = 645 \text{ sq. ft.}$$

5. Interview Rooms: Defined as small enclosed rooms for 2-5 persons in which confidential discussions between caseworkers and clients can be held.

Standard - base allowance of 40 sq. ft. for movement space and small conference table, to which is added 15 sq. ft. per seat for interviewer and clients.

Illustration - interview room for caseworkers and 2 clients:

$$40 + (3 \times 15) = 85 \text{ sq. ft.}$$

6. Lounge for Employees: Defined as a space set aside for use by staff members during breaks and lunch periods. Such space is equipped with one or more tables, chairs and occasional furniture, and may also have beverage and food vending machines for the employees' convenience.

Standard - base allowance of 100 feet for furniture to which is added 15 sq. ft. per person.

Illustration - lounge with capacity of 20 employees:

$$100 + (20 \times 15) = 400 \text{ sq. ft.}$$

7. Private Lavatory: Defined as space containing a toilet and wash basin, usually accessible only from private offices occupied by a top-ranking agency official (e.g. commissioners, full-time chairpersons, etc.). Space for a shower cabinet as part of a private lavatory may be added for justifiable reasons.

Standard - allowance of 40 sq. ft. for toilet and wash basin, to which may be added 10 sq. ft. for a shower cabinet if necessary.

8. Library: Defined as space reserved for storage and study of printed reference materials used by professional staff for research in connection with agency activities. Such space is normally furnished with reference tables and chairs, multi-shelf racks for book storage and other necessary accessories.

Standard - base allowance of 100 sq. ft. for tables and chairs, to which is added 0.3 sq. ft. per bound volume of reference material. Individual books and collections of periodicals included in a single binder are counted as volumes; individual periodicals, magazines and newsletters are not counted.

Illustration - 500 volume law library:
 $100 + (0.3 \times 500) = 250 \text{ sq. ft.}$

9. Reception Area: Defined as an enclosed or open area intended for greeting visitors and seating for brief periods while waiting to meet with agency personnel. Such reception areas are usually part of a suite or ante-room staffed by executive secretaries or clerks. Furniture includes chairs, coat racks, occasional tables and such accessories as decorative plant materials.

Standard - base allowance for accessory furniture of 50 sq. ft. to which is added 15 sq. ft. per person seating capacity.

Illustration - 6 person reception area:
 $50 + (6 \times 15) = 140 \text{ sq. ft.}$

10. Training room: Defined as an enclosed space for instruction of agency personnel which requires table surfaces for writing, or stands for typewriters, computer terminals and other office machinery used for "hands-on" training. Such space differs from classroom facilities where conventional chairs, or student seating with writing surfaces attached to a chair arm are used for lectures or seminars.

Standard - base allowance of 75 sq. ft. for instructor's station and accessory equipment, plus 25 sq. ft. per student.

Illustration - data entry terminal training room with capacity for 15 trainees:
 $75 + (15 \times 25) = 450 \text{ sq. ft.}$

11. Public Waiting Area: Defined as an open area with seating for use by members of the public who are waiting to do business with a State agency. Examples of such waiting areas in State facilities include district offices of human service agencies that serve large numbers of public clients.

Standard - 75 sq. ft. minimum or 15 sq. ft. per person total seating capacity, whichever is greater.

Illustrations: - waiting area for 4 persons: 75 sq. ft.

waiting area for 8 persons: 120 sq. ft.

These standards are incorporated into the computerized format of the Part III worksheet used in Level III space planning. Please note that Column C of this worksheet is X'ed out in the space adjacent to some of the support space categories listed in Column B. In such cases, the assignable area required will be automatically computed, based on the number of units and the maximum seating capacity required for these units.

The following page illustrates a completed Part III worksheet.

WORKSHEET FOR PLANNING STATE OFFICE SPACE NEEDS
PART III:
SUPPORT SPACE AND SPECIALIZED AREAS
DEPARTMENT OF PUBLIC WORKS
MANAGEMENT SERVICES DIVISION

AGENCY NAME: HYPOTHETICAL STATE AGENCY
AGENCY #: 1234
SUBDIVISION OR FUNCTION: CENTRAL OFFICE - HARTFORD
PREPARED BY: H. CRANDALL
TELEPHONE #: 566-1234
DATE: AUGUST 3, 1994
AGENCY/SUBDIVISION CODE: DPW789 (ASSIGNED BY PUBLIC WORKS)

*****AREA SUMMARY FOR THIS SUBDIVISION*****
SPACE FOR SUPPORT/SPECIALIZED AREAS 888
ADD-ON FOR INTRA-UNIT CIRCULATION
TOTAL ASSIGNABLE SQUARE FEET 888

A	B	C	D	E	F	G	H	I	J	K
ITEM	DESCRIPTION OF SUPPORT SPACES AND SPECIALIZED AREAS	AGENCY ESTI-# OF	AVAILABILITY	IF SPECIAL FURNITURE OR EQUIPMENT IS TO BE	TO BE COMPLETED BY PUBLIC WORKS	*****				
NUM- BER		ASSIG-UNITS # OF	MAXIMUM ASSIGNED TO THIS SUPPORT SPACE, LIST	NUMBER OF ADD-ON FOR ADD-ON FOR ASSIGNABLE						
		TABLE SQ.FT. RE- QUIREMENT (REQUESTED PER WK. CAPACITIES OF EACH ITEM (E.G., 2X315X21ETC.))	INTRA-UNIT: SQ. FEET	RECOMMENDED: EQUIP/FURN: CIRCULATION REQUIRED						
1	AUDIO-VIDEO/PHOTOGRAPHY STUDIO	1	15	12	285					
2	BUILDING MAINTENANCE AND MANAGEMENT	1	15	12	285					
3	CLASSROOM	1	15	12	285					
4	COMPUTER EQUIPMENT/OPERATIONS ROOM	1	15	12	285					
5	CONFERENCE ROOM, PRIVATE	1	15	12	285					
6	CONFERENCE ROOM, PRIVATE	1	15	12	285					
7	CONFERENCE ROOM, PRIVATE	1	15	12	285					
8	CONFERENCE TABLE/SEATING AREA, OPEN	1	15	12	285					
9	CONFERENCE TABLE/SEATING AREA, OPEN	1	15	12	285					
10	CONFERENCE TABLE/SEATING AREA, OPEN	1	15	12	285					
11	COURTROOM, 16-JUDGES	1	15	12	285					
12	COURTROOM, 8-JUDGES	1	15	12	285					
13	CUSTOMER SERVICE AREA	1	15	12	285					
14	DISPLAY GALLERY	1	15	12	285					
15	FOOD PREPARATION, SERVICE AND DINING	1	15	12	285					
16	GRAPHIC ARTS WORK AREA	1	15	12	285					
17	HEARING ROOM (W/OFFICERS' DATES & TABLES)	1	15	12	285					
18	INFORMATION COUNTER	1	15	12	285					
19	INTERVIEW ROOM (CONFIDENTIAL)	1	15	12	285					
20	INTERVIEW ROOM (CONFIDENTIAL)	1	15	12	285					
21	INTERVIEW ROOM (CONFIDENTIAL)	1	15	12	285					
22	JANITOR'S CLOSET	1	15	12	285					
23	LABORATORY, GENERAL BENCH AREA	1	15	12	285					
24	LABORATORY, MET-BENCH/FUME HOODS	1	15	12	285					
25	LAVATORY, PRIVATE	1	15	12	285					
26	LIBRARY (EXPRESS UNITS IN # OF VOLUMES)	300	10	2	215					
27	LOCKER/SHOWER AREA	1	15	12	285					
28	LOCKUP FOR TRIAL DETAINEES	1	15	12	285					
29	LOUNGE FOR EMPLOYEES	1	15	12	285					
30	MAIL ROOM	1	15	12	285					
31	MEDIA CENTER	1	15	12	285					
32	PRINTING/REPRODUCTION AREA	1	15	12	285					
33	PUBLIC AREA FOR FORMS PREPARATION	1	15	12	285					
34	PUBLIC INFORMATION AREA	1	15	12	285					
35	PUBLIC WAITING AREA	1	15	12	285					
36	RECEPTION AREA	1	15	12	285					
37	RECORDS MANAGEMENT	1	15	12	285					
38	SECURITY AREA	1	15	12	285					
39	SHIPPING AND MATERIALS RECEIVING AREA	1	15	12	285					
40	STORAGE, GENERAL SUPPLIES & EQUIPMENT	100	15	12	285					
41	STORAGE, DORMANT FILES (SECURE)	1	15	12	285					
42	STORAGE, ACTIVE FILES	1	15	12	285					
43	TELEPHONE CLOSET	1	15	12	285					
44	TRAINING ROOM	1	15	12	285					
45	TRASH STORAGE (ENCLOSED SPACE)	1	15	12	285					
46	VAULT, WALK-IN W/SECURITY DOOR	1	15	12	285					

Worksheet Summary

The space needs spelled out in the three parts of the worksheet series are totalled in a summary sheet for each agency subdivision, and aggregated for the entire agency. As noted earlier, the assignable space requirement must be augmented by an allowance for non-assignable space to arrive at a gross floor area requirement.

The following page illustrates a summary of space requirements for a hypothetical agency with three subdivisions, one of which was used as the basis for the preceding Parts I, II and III worksheet series.

PRELIMINARY SUMMARY OF ASSIGNABLE SPACE
REQUIREMENTS PROJECTED 3 YEARS

CENTRAL OFFICES
HYPOTHETICAL STATE AGENCY

SUBDIVISION	:NO.:		:OFFICE:		:UNASSIGNED :EQUIPMENT	:SUPPORT:		:TOTAL:	:AVERAGE:			
	:OF	:STAFF	:STAFF	:SPACE		:SPACE	:AREA		:AREA PER	:PERSON		
OFFICE OF THE COMMISSIONER	:	18	:	2,587	:	355	:	1,050	:	3,992	:	221.80
GRANTS ADMINISTRATION	:	19	:	2,134	:	618	:	1,246	:	3,998	:	210.40
GRANTS PROCESSING	:	110	:	12,565	:	1,320	:	2,253	:	16,138	:	146.70
CONSUMER SERVICES	:	159	:	17,680	:	1,150	:	3,580	:	22,410	:	140.90
RESEARCH AND EVALUATION	:	53	:	5,787	:	1,430	:	225	:	7,442	:	140.40
TECHNICAL AND FINANCIAL SUPPORT	:	87	:	8,935	:	795	:	1,475	:	11,205	:	128.80
PERSONNEL AND PAYROLL	:	38	:	4,230	:	576	:	780	:	5,586	:	147.00
PURCHASING AND ACCOUNTS PAYABLE	:	16	:	1,675	:	405	:	295	:	2,375	:	148.40
TOTALS	:	500	:	55,593	:	6,649	:	10,904	:	73,146	:	146.30

NOTE: DATA COMPILED BASED ON WORKSHEETS DATED 5/20/87, AS PREPARED BY STAFF OF
HYPOTHETICAL STATE AGENCY, AND COMPUTED BY THE MANAGEMENT SERVICES
DIVISION OF THE DEPARTMENT OF PUBLIC WORKS

CONCLUSION

This manual has presented a series of planning guidelines to assist agencies in determining space needs, and a set of standards and criteria to serve as a uniform basis for calculating those needs. The standards are a common reference point for use by all State agencies and will eliminate the confusion and contradictions implicit in the use of different (and often conflicting) sources for space calculations. Although the space planning methods described in this manual are adaptable to unique situations, it will be incumbent on State agencies to show justification for exceptions to the space standards forming the basis for the planning models.

The space planning methods discussed in this manual have sufficient flexibility to adapt to a variety of applications. For example, the needs of one agency may dictate the use of modular panels and systems furniture as part of an "office landscape plan" layout, while another agency of comparable size will require a more conventional layout of private offices and open unpartitioned areas for general staff. The same space standards and criteria apply to both situations, and although the physical layout characteristics will result in distinctly different office environments, parity will occur in assigning space based on functional requirements.

The Management Services staff of Public Works stands ready to assist and work with State agencies in using these space planning methods and standards. The following services are available:

1. Public Works staff can provide agencies with Level II calculations of space needs forecasts using data input on personnel projections from the agencies. Please call the Management Services staff at 566-4421 for assistance in obtaining a Level II space needs forecast.
2. Training and technical assistance will be provided to State agency personnel in preparing Level III projections of specific space requirements.
3. It is possible for State agencies to gain direct access to the Level II and Level III planning worksheets and formats. In order to do so, the agency must have:
 - * dial-up capabilities using a 1200-2400 baud modem; and
 - * Digital Equipment Corporation VT 220 terminals; or
 - * terminals with software emulating the DEC VT 220 interface requirement.

For further information or direct computer tie-in, please call the Management Services Division at 566-4421.

APPENDIX A

Bibliography

Facilities Inventory & Classification Manual, Federal Department of Health, Education and Welfare; 1973.

Planning the New Corporate Headquarters, B.P. Gould (John Wiley & Sons, N.Y.); 1983.

Master Space Plan for Hartford: Travelers Insurance Companies, Russell, Gibson, VonDohlen; 1979.

Facilities Management Handbook, J. Molman (Van Nostrand Reinhold Co.); 1983.

Training Course 302 Reference Manual: Institute of Real Estate Management; 1986.

Training Course Handbooks on Office Space Planning and Design & Management; American Management Association; 1986.

Planning & Designing the Office Environment, D.A. Harris, et al. (Van Nostrand Reinhold Co., New York); 1981.

Facilities Planning, R.L. Brauer, American Management Association; 1986.

APPENDIX B

DEFINITIONS FOR FACILITIES SPACE CATEGORIES

As noted on page 2 of this manual, space in State facilities is composed of assignable and non-assignable areas. These two categories, added together, comprise the gross building area. Although the principal functional areas of an agency's space requirements are expressed in assignable square feet, non-assignable areas are part of an agency's overall facilities needs.

The following definitions are taken from the Facilities Inventory Classification Manual by the former U.S. Department of Health, Education and Welfare.

GROSS AREA:

- A. Definition: The sum of the floor areas of the building included within the outside faces of exterior walls for all stories, or areas that have floor surfaces.
- B. Basis for Measurement: gross area should be computed by measuring from the outside face of exterior walls, disregarding cornices, pilasters, buttresses, etc., which extend beyond the wall face. Measured in terms of gross square feet (GSF).
- C. Description: In addition to all the internal floored spaces obviously covered above, gross area should include basements (with head room of more than 6'6"), attics, garages, enclosed porches, penthouses, mechanical-equipment floors, lobbies, mezzanines, all balconies utilized for operational functions, and corridors, provided they are within the outside face lines of the building. Stairways, elevator shafts, mechanical-service shafts, and ducts, are to be counted as gross area on each floor through which the shaft passes.
- D. Limitations: Exclude open courts and lightwells, or portions of upper floors eliminated by rooms or lobbies that rise above single-floor ceiling height.

ASSIGNABLE AREA:

- A. Definition: The sum of all areas on all floors of a building available for assignment to an occupant, including every type of space functionally usable by an occupant (excepting those spaces defined as custodial, circulation, mechanical, and structural areas).
- B. Basis for Measurement: All assignable areas should be computed by measuring from the inside finishes of surfaces which form the boundaries of the designated areas. Do not include unusable areas having less than 6'6" clear head room.
- C. Description: Included should be space subdivisions for offices, classrooms, laboratories, seminar and conference rooms, libraries, file rooms, storage rooms, etc., including those for special purposes (e.g., auditoriums, cafeterias, TV studios, faculty and locker and shower rooms, maintenance and repair shops, garages) which can be put to useful purposes in accomplishing the agency's missions.
- D. Limitations: Deductions should not be made for necessary building columns and projections.

NON-ASSIGNABLE AREA:

That portion of the building not available for assignment to building occupants, but necessary for general operation. By definition, non-assignable area consists exclusively of: circulation, custodial, mechanical, and structural areas.

1. Circulation Area:

- A. Definition: Required for physical access to some subdivisions of space whether directly bounded by partitions or not.
- B. Basis for Measurement: Should be computed by measuring from the inner faces of walls or partitions which enclose horizontal spaces used for such purposes. Deductions should not be made for necessary building columns and minor projections. Do not include unusable areas having less than 6'6" clear head room.
- C. Description: Should include but not be limited to corridors, elevators shafts, escalators, fire towers, stairways, loading platforms, elevator lobbies, and tunnels and bridges.

- D. Limitations: When determining corridor areas, only horizontal spaces required for general access should be included -- not aisles used only for circulation within office suites, auditoriums, or other working areas. Deductions should not be made for necessary building columns and projections.

2. Custodial Area

1. A. Definitions: The sum of all areas of a building used for its protection, care, and maintenance.
- B. Basis for Measurement: Should be measured from the inside surfaces of enclosing walls or permanent partitions. Deductions should not be made for necessary building columns and minor projections. Do not include unusable areas with less than 6'6" clear head room.
- C. Description: Should include such areas as trashrooms, guardrooms, custodial rooms, custodial locker rooms, and custodial supply rooms.
- D. Limitations: Should not include central physical-plant shop areas, nor special-purpose storage or maintenance rooms, such as supply closets.

3. Mechanical Area

- A. Definition: That portion of the gross area designed to house mechanical equipment, utility services and non-private toilet facilities.
- B. Basis for Measurement: Should be computed by measuring from the inner faces of the walls, partitions, or screens which enclose such areas. Do not include unusable areas with less than 6'6" clear head room.
- C. Description: Should include, but not be limited to, mechanical areas in central utility plants, air-duct shafts, boiler rooms, fixed mechanical and electrical equipment rooms, fuel rooms, mechanical-service shafts, meter and communications closets, service chutes, stacks, and non-private toilet rooms (custodial and public).
- D. Limitations: Deductions should not be made for necessary building columns and projections.

4. Structural Area

- A. Definition: Should be construed to mean that portion of the gross area which cannot be occupied or put to use because of structural building features.
- B. Basis for Measurement: Precise computation by direct measurement is not contemplated under these definitions. Should generally be determined by assuming it to be the residual area after the assignable, circulation, custodial, and mechanical areas have been subtracted for the gross area.
- C. Description: Examples of building features normally classified as structural areas are exterior walls, fire walls, permanent partitions, and unusable areas in attics, basements, or comparable portions of a building.

APPENDIX C

CAFETERIA SPACE CALCULATION FORMULA

FACTORS

1. Total office facility population
2. Utilization rate
3. Assumed # of shifts
4. Efficiency loss for shift overlaps

FORMULAS

- A. Population x Utilization rate, divided by # of shifts, plus 10% for efficiency loss, equals total seating capacity.
- B. Total Seating Capacity x 15 = Dining area in sq. ft.
- C. Total Seating Capacity x 5 = Serving area in sq. ft.
- D. Population x Utilization rate x 3.2 = Kitchen area in sq. ft.
Sum of B + C + D = Total Cafeteria Area

ILLUSTRATION

500 persons x .65 utilization rate = 325/2.5 shifts + 10% = 143

143	x	15	=	2,145
143	x	5	=	715
500	x	.65	x	3.2 =
				<u>1,040</u>

Total Cafeteria Area 3,900 sq. ft.

APPENDIX D

SPACE ASSIGNMENT CRITERIA AND STANDARDS

SPACE ASSIGNMENT CRITERIA AND STANDARDS

Pg 2

ITEM NUMBER	POSITION OR FUNCTION	SPACE CATEGORY CODE	ASSIGN- ABLE SQ. FEET	TYPE OF SPACE	ADD-ON FOR INTRA UNIT CIRCULATION	CRITERIA FOR SPACE ASSIGNMENT	EQUIPMENT AND FURNITURE INCLUDED IN SPACE ASSIGNMENT	COMMENTS AND NOTES
6*	LINE SUPERVISOR	MGR-1	120*	OPEN WORK STATION	10-12x	OVERSEES AND CONTROLS DAILY ACTIVITIES OF PROFESSIONAL AND CLERICAL LINE STAFF; RESPONSIBLE FOR SIGNIFICANT LEVEL OF STAFF PRODUCTION AND OUTPUT.	60" DESK & CHAIR, WORKTABLE, 2-3 CHAIRS FOR MEETINGS, BOOKCASE; OPEN OFFICE WORKSTATION MAY HAVE HAND-ON STORAGE CABINETS AND FILES*	SHOULD BE LOCATED IN CLOSE PROXIMITY TO STAFF SUPERVISED BY THIS PERSON
7*	SENIOR PROFESSIONAL COUNSELOR CONFIDENTIAL INTERVIEWER	PROF-3	110*	PRIVATE OFFICE OR OPEN WORK STATION	10-12x	RESPONSIBLE FOR PRODUCING CRITICAL ADMINISTRATIVE, PROGRAMMATIC OR CREATIVE WORK THAT HAS MAJOR IMPACT ON AGENCY OPERATIONS OR POLICIES; MAY NEED SMALL PRIVATE OFFICE IF DUTIES CALL FOR FREQUENT CONFIDENTIAL COUNSELING OR INTERVIEW (MORE THAN 50% OF WORKWEEK).	60" DESK & CHAIR 1-2 CHAIRS FOR INTERVIEWS, ETC. WORKTABLE, BOOKCASE, PERSONAL FILES; OPEN OFFICE WORKSTATION MAY HAVE HAND-ON UNITS FOR STORAGE AND COMPUTER TERMINAL; 62" HIGH PARTITIONS.	PRIVATE OFFICE ONLY IF MAJORITY OF TIME INVOLVES CONFIDENTIAL DISCUSSIONS, TELEPHONE CONVERSATIONS OR PERSONAL INTERVIEWS
8*	PROFESSIONAL	PROF-2	90*	OPEN WORK STATION	10-12x	WORK INVOLVES CONCENTRATION IN PREPARING OR REVIEWING CORRESPONDENCE, REPORTS, DATA ANALYSES, OR ADMINISTRATIVE MATERIAL.	60" WORK SURFACE AND CHAIR, SIDE CHAIR, BOOKCASE, PERSONAL FILES; MODULAR 62" HIGH PARTITIONS	
9*	FIELD PROFESSIONAL PART-TIME PROFESSIONAL PREPROFESSIONAL OR CAREER TRAINEE INTERV	PROF-1	60*	OPEN WORK STATION	10-12x	PROFESSIONAL RESPONSIBILITIES REQUIRE WORK OUTSIDE THE CONVENTIONAL OFFICE ENVIRONMENT MORE THAN 50% OF THE WORK- WEEK; ALSO INCLUDES TRAINEES, INTERNS PART-TIME AND SUMMER STAFF.	48" DESK AND CHAIR; BOOKCASE FOR REFERENCE MATERIAL	WORKSTATION MAY BE SHARED BY MORE THAN ONE FIELD STAFF MEMBER
10*	EXECUTIVE SECRETARY ADMINISTRATIVE SECRETARY STAFF ASSISTANT	CLER-3	90*	OPEN OFFICE	10-12x	PROVIDES HIGH-LEVEL SECRETARIAL SERVICES; TO AGENCY EXECUTIVES, DIVISION OR BUREAU HEADS, GREETES IMPORTANT VISITORS; SCHEDULES MEETINGS AND APPOINTMENTS; HANDLES CONFIDENTIAL DOCUMENTS	60-72" SECRETARIAL DESK WITH RETURN FOR TYPEWRITER OR WORK PROCESSOR, CHAIR; ADD FOR FILES, STORAGE, AND CHAIRS FOR WAITING VISITORS	SPACE MAY BE PART OF EXECUTIVE SUITE
11*	SECRETARY CLERK TYPIST STAFF ASSISTANT	CLER-2	75*	OPEN OFFICE AREA	10-12x	PERFORMS GENERAL AND ROUTINE CLERICAL WORK, INCLUDING TYPING, DICTATION, FILING, TELEPHONE CALLS, RECEPTION AND RECORD-KEEPING	STANDARD 60" CLERICAL DESK WITH RETURN OR SIDE TABLE FOR TYPE- WRITER OR WORD PROCESSOR, CHAIR	
12*	DATA ENTRY OPERATOR WORD PROCESSING OPERATION FILE OR MAIL CLERK MESSENGER	CLER-1	60*	OPEN OFFICE AREA	10-12x	DUTIES INVOLVE WORK WITH AUTOMATED ELECTRONIC DATA ENTRY EQUIPMENT; ROUTINE DATA ENTRY, WORD PROCESSING; FILING, NON-CONFIDENTIAL RECORDS	48" TABLE FOR CRT, KEYBOARD, SMALL PRINTER, CHAIR; 48"x130" WORK- SURFACE FOR CLERKS AND MESSENGERS	WORKSTATIONS FOR MAIL CLERK & MESSENGERS MAY BE LOCATED IN SUPPORT SPACE.

SPACE ASSIGNMENT CRITERIA AND STANDARDS

PUBLIC WORKS
MANAGEMENT SERVICES DIVISION

ITEM NUM- BER	POSITION OR FUNCTION	SPACE CATEGORY CODE	ASSIGN- ABLE SQ. FEET	TYPE OF SPACE	ADD-ON FOR INTRA UNIT CIRCULATION	CRITERIA FOR SPACE ASSIGNMENT	EQUIPMENT AND FURNITURE INCLUDED IN SPACE ASSIGNMENT	COMMENTS AND NOTES
1*	ELECTED HEAD OF STATE AGENCY COMMISSIONER FULL-TIME CHAIRPERSON	EXEC-3	350*	PRIVATE OFFICE	NONE IF PART OF SUITE: OTHERWISE ADD 10%	ELECTED STATE OFFICE, OR APPOINTED BY & REPORTS TO GOVERNOR, LEGISLATURE OF GOVERNOR, LEGISLATURE, OR MAJOR BODY, ACCOUNTABLE FOR AN ENTIRE STATE AGENCY AND ITS OPERATIONS; FREQUENTLY HOLDS CONFIDENTIAL DISCUSSIONS WITH KEY STAFF AND RECEIVES IMPORTANT VISITORS FROM OTHER AGENCIES AND THE PUBLIC.	EXECUTIVE-SCALE DESK AND CHAIR, CREDENTIA, CABINETS, SOFA/UPHOLS- TERED CHAIRS, OCCASIONAL TABLES, CONFERENCE TABLE/CHAIRS FOR 6-8 PERSONS, PERSONAL FILES	AGENCY HEAD'S OFFICE MAY BE PART OF SUITE WITH CONFERENCE ROOM AND RECEPTION AREA; ADD FOR PRIVATE LAVATORY; ONLY ONE 'EXEC-3' UNIT PER AGENCY
2*	DEPUTY AGENCY HEAD DEPUTY COMMISSIONER DEPUTY SECRETARY VICE CHAIRMAN (FULL-TIME AGENCY EXECUTIVE DIRECTOR	EXEC-2	275*	PRIVATE OFFICE	NONE IF PART OF SUITE: OTHERWISE ADD 10%	SECOND-IN-CHARGE OF AN ENTIRE AGENCY WHOSE HEAD IS ELECTED, APPOINTED BY GOVERNOR, LEGISLATURE, OR MAJOR BODY, E.G. PUC, DD, OF TRUSTEES, ETC.). ALSO, AGENCY HEAD WHO IS NOT APPOINTED BY THE GOVERNOR, LEGISLATURE OR MAJOR BODY.	EXECUTIVE-SCALE DESK AND CHAIR, CREDENTIA, CABINETS, SOFA UPHOLSTERED SEATING AND OCCASIONAL FURNITURE, PERSONAL FILES	MAY BE APT OF EXECUTIVE SUITE; THIS SPACE CATEGORY APPLIES PRIMARILY TO DEPUTY COMMISSIONER OR EQUIVALENT RANK.
3*	CHIEF OF DIVISION, BUREAU OR MAJOR SUB-UNIT OF STATE AGENCY	EXEC-1	200*	PRIVATE OFFICE	NONE IF PART OF SUITE: OTHERWISE ADD 10%	HEAD OF A MAJOR SUBDIVISION OF A STATE AGENCY WHO REPORTS TO AGENCY HEAD; IN CHARGE OF KEY AGENCY PROGRAM OR STRATEGIC FUNCTIONS; MAKES KEY DECISIONS INVOLVING AGENCY POLICIES; REGULARLY RECEIVES VISITORS FROM OUTSIDE THE AGENCY.	72" DESK AND CHAIR, PERSONAL RECORDS STORAGE, SHALL TABLE WITH 3-4 CHAIRS FOR MEETINGS WITH STAFF AND VISITORS.	MAY NEED TO BE LOCATED IN PROXIMITY TO UNIT PERSONNEL AND ACTIVITIES HEADED BY THIS POSITION.
4*	SENIOR MANAGER PROGRAM CHIEF DISTRICT OFFICE OR BRANCH MANAGER	MGR-3	175*	PRIVATE OFFICE	NONE IF PART OF SUITE: OTHERWISE ADD 10%	RESPONSIBLE FOR ACTIVITIES OF AN AGENCY UNIT WITH SUBSTANTIAL NUMBER OF PROFESSIONAL STAFF; ACCOUNTABLE FOR AN IMPORTANT AGENCY PROGRAM OR ACTIVITY; REGULARLY HOLDS CONFIDENTIAL MEETINGS; MAY BE HEAD OF AN AGENCY DISTRICT OFFICE OR MAJOR SATELLITE BRANCH EXEC ASST. REPORTS TO AGENCY HEAD OR DEPUTY.	60" DESK AND CHAIR, PERSONAL RECORDS STORAGE, 2-3 CHAIRS FOR MEETINGS WITH STAFF AND VISITORS, COMPUTER TERMINAL WORKSTATION, BOOKCASE, WORKTABLE	
5*	UNIT MANAGER	MGR-2	150*	PRIVATE OFFICE OR OPEN WORK STATION	10-12%	RESPONSIBLE FOR IMPORTANT DAY-TO-DAY ACTIVITIES OF PROFESSIONAL STAFF SUB- ORDINATES: WORKS ON PROJECTS ASSIGNED BY AGENCY EXECUTIVES OR SENIOR LEVEL AGENCY MANAGEMENT.	60" DESK & CHAIR, WORKTABLE, 2-3 CHAIRS FOR MEETINGS, BOOKCASE; OPEN OFFICE WORKSTATION MAY HAVE HANG-ON STORAGE CABINETS AND FILES SURFACE FOR COMPUTER TERMINAL 75" PARTITION.	

APPENDIX E

INSTRUCTIONS FOR PREPARING LEVEL III WORKSHEETS

INTRODUCTION

These instructions are intended to assist agencies in preparing the new DPW worksheets which will be used for determining future facilities space needs. This computerized planning format is based on criteria and standards that take into account the functions and activities of State agencies and the nature of their operations. The system includes the total range of assignable space requirements in terms of workstations for office personnel (whether in private offices or open areas), equipment and furniture, and support areas--ranging from general functions such as conference rooms and reception areas, to special functions such as laboratories and media centers.

It is important that agencies be accurate and complete in preparing these forms, because the information supplied will be the basis for calculating the amount of space assigned to them.

If you have questions or need assistance, please call DPW Facilities Planning Director at 566-4230.

SPACE ASSIGNMENT CRITERIA AND STANDARDS

This document is the key reference source in establishing the quantities and types of office workspace for agency personnel. There are 12 categories under four general headings:

1. Executive: This category includes the key personnel in the top management levels of an agency, and covers chief executive officers such as commissioners and their deputies, executive directors, full-time board chairpersons and vice chairpersons, and the heads of major agency units.
2. Managerial: These personnel are responsible for planning, organizing, directing and controlling long-range and day-to-day agency operations, and are responsible for administering agency policies and programs and implementing directives of the agency's leadership. This category covers the range from senior Management and program chiefs to line supervisors, and generally includes personnel under the State's "MP" employee compensation plan.

3. Professionals: Non-supervisory personnel having competencies and responsibilities in particular fields and specialties come under this heading. These agency staff members perform services or produce work output, under direction and supervision of agency management, that implement or support agency programs, services and functions. Please note that "field professionals" are those personnel who are away from the office for at least half of the typical work week.
4. Clerical: Secretaries, typists, clerks, receptionists, data entry operators and general office support personnel are included in this category.

It is important that the agency personnel who prepare the worksheets read and become familiar with the Space Assignment Criteria and Standards. Rather than using specific titles, classifications or compensation levels to define categories of space assignment, this system uses functional activities and responsibilities to determine the amount and type of space required to carry out duties. Therefore, the Position or Function heading shown on this document lists generic titles as guidelines, but the Criteria for Space Assignment heading should be used as the principal reference in suggesting the space code category on Part I of the worksheet series.

Please note the range of furniture and equipment shown for each category of agency personnel. The column headed Equipment and Furniture represents what is typically required for these functions and positions and is assumed to be part of the basic space allowance. Such items must be included as "extra" or "special" in the listings of assigned equipment/furniture in column "E" of the Part I worksheet.

PART I WORKSHEET: AGENCY OFFICE PERSONNEL

1. A separate Part I worksheet--as well as the Part II and Part III worksheets for unassigned equipment, furniture and support space--should be prepared for each unit or division of your agency. Please fill out the heading block showing agency name, number, agency subdivision, date and the name and telephone number of the person preparing the worksheet.
2. All authorized positions, both filled and vacant, should be listed in column "B". Moreover, the position titles of any future office personnel realistically projected for the agency unit within the next three years should be included.

3. The names of incumbents should be listed in column "C". If the position is vacant, the letter "V" should be entered; projected positions expected to be authorized within three years should be designated with the letter "P".
4. Referring to the criteria in the previously described document entitled Space Assignment Criteria and Standards, the person preparing the Part I worksheet should enter in column "D" a suggested Space Code Category, e.g., EXEC-1, PROF-2, CLER-3, etc. DPW will refer to the agency's suggested category in determining the space standard to be applied to each position listed.
5. As noted earlier, extra equipment and special furniture should be listed only if it is in excess of, or above and beyond, the general range of items described in the Space Assignment Criteria and Standards document under the column heading "Equipment and Furniture Included in Space Assignment." In preparing column "E" of Part I, please refer to the Part II worksheet: each item should be referred to by the number indicated in column "A" of the item. For example, if the position additionally requires the assignment of one drafting table and stool, please enter (under column "E" of Part I) the listing 15 x 1; for a data entry work station, list it as 12 x 1.
6. The balance of the Part I worksheet will be completed by Public Works after it is returned.

B. PART II: UNASSIGNED FURNITURE AND EQUIPMENT

This worksheet deals with furniture and equipment not assigned to a specific position. Photocopy machines, computer terminal workstations shared by several personnel, etc. should be listed here (both currently on hand and projected three years hence) with the quantity of each item. Again, this Part II form should be completed for each functional subdivision of your agency. It is important to re-emphasize that equipment and furniture items must not be included on Part II if such items are part of the general range allowed for a given position category, or are extra items that are assigned to a specific position and shown on Part I.

PART III: SUPPORT SPACE AND SPECIALIZED AREAS

1. In addition to such conventional support functions as conference rooms and reception areas, there are several specialized spaces listed on this form that are not generally found in office environments. However, please review the list carefully to make sure you include everything that is needed for each agency subdivision and the agency as a whole.
2. Please note that there are three listings for each type of conference space, both private rooms and open areas. If a subdivision needs two conference rooms, one with a six-person capacity and another for 15 persons, each should be entered separately. Thus, line 5 would have, under column "D", an entry of "1" and under column "F" an entry of "6". Line 6 on the same page would have "1" under column D, and "15" under column "F". Based on the seating capacity required for these spaces, the computer will calculate the square footage required.
3. Some of the support space descriptions (column "B"), such as conference rooms and reception areas, do not require an agency estimate of square footage required. In such cases, the space next to these descriptions in column "C" is X'ed out, and the only information required from the agency is the number of units--to be recorded in column "D"--and the maximum seating capacity for such units--recorded in column "F". The formulas built into the computerized worksheets will automatically calculate the amount of space required. All other uses (e.g., mail rooms, laboratories, storage, etc.) require an area estimate--expressed in assignable square feet--for such uses to be entered in column "C".
4. If specialized equipment requiring significant additional space (e.g., audiovisual equipment in a conference room) will be located in support spaces, please list such equipment in column "G" of the Part III worksheet. However, the formulas built into the worksheets include most general equipment and furniture space requirements. For example, the basic furniture requirements for a conference room (table and chairs) are already factored in and should not be listed separately in column "G". Again, do not list equipment or furniture shown elsewhere on the Part I and Part II worksheets.

5. Please estimate the average number of hours per week the support spaces you require will be used and enter the number in column "F", unless the space corresponding to that specific item is X'ed out (e.g., mail room, vault, etc.).

OFF-STREET PARKING

Finally, any agency intending to request off-street parking in conjunction with a Space Request, should keep in mind that it is the State's policy to encourage its employees to use the alternatives of ridesharing or public transportation instead of private automobile for commuting between home and workplace whenever possible. As a general guideline, the Department of Public Works is using a ratio of one off-street parking space for three employees in urban locations that are served by public transportation. Only for those workplaces where there are limited or no opportunities for forming carpools and vanpools, or where there is no convenient proximity to frequent peak hour commuter bus service, should agencies consider requesting off-street parking for individual employees' personally owned automobiles. In such cases, please submit materials justifying the parking ratio requested. You should also include information on state-owned vehicles assigned to the agency.

After the form is prepared by DPW, it will be submitted to you for review and sign off by the agency head. Return it to the Department of Public Works.